Name:_____ Date:_____

A2CC: Synthetic Division of Polynomials

Do Now:

1. Use long division to divide: $(2x^3 - 9x^2 + 10x - 7) \div (x - 3)$

Model 1: Use synthetic division to find the quotient and remainder.

$$(2x^3 - 9x^2 + 10x - 7) \div (x - 3)$$

Exercises: Use synthetic division to find the quotient and remainder.

1. $(x^3 - 2x^2 - 5x + 6) \div (x - 3)$
2. $(x^3 - x^2 - 5x + 2) \div (x + 2)$
3. $(2x^3 + x^2 - 3x + 7) \div (x + 1)$
4. $(3x^3 - 2x^2 + x - 1) \div (x - 1)$
5. $(x^4 - 3x^3 + 7x^2 - 2x + 1) \div (x + 2)$
6. $(2x^4 - 3x^2 + 4x - 2) \div (x - 1)$
7. $(3x^4 + x^3 - 2x + 3) \div (x + 1)$
8. $(x^3 - 27) \div (x - 3)$
9. $(x^4 - 16) \div (x - 2)$
10. $(-\frac{1}{3}x^4 + \frac{1}{6}x^2 - 7x - 4) \div (x + 3)$